the nuclear power stations is too small to be measured. The estimated values are well within the dose limites prescribed by the AERB for members of the public.

Review of safety status and enforcement of safety measures is a continuing process and the AERB is performing these tasks as per the statutory requirements.

Kakrapar Atomic Power Station affected by flood waters

1338 SHRI VIREN J. SHAH: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that flood waters had entered the turbine room of the Kakrapar Atomic Power Station in Gujarat which badly affected the plant;

(b) if so, what is the extent of the damage and what safetv measures were taken;

(c) by when and at what approximate cost the necessary repairs will be carried out in the plant;

(d) by when the plant will be recommissioned;

(e) what will be the extent of loss due to the non-working of the plant; and

(f) what steps Government have already taken or propose to take to obviate the chances of such reeurrence in future?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) and (b) On June 16, 1994, due to very havey rains in Kakrapar area the water level in the Mothicher lake from where the make up cooling water for the Kakrapar Atomic Power Project is being taken, started rising alarmingly and due to inadequate outflow of water, the flood waters entered the piant sorroundings and the basement of the turbine buildings of the Project. There was no major damage to the plant and equipment installed in the basement of the turbine buildings. Some equipment like motors located in the basement were affected. Dewatering of turbine building basement and rehabilitation of the affected equipment have since been completed.

(c) to (e) Kakrapar Atomic Powes Station consists of two units of 220M We each. Unit-i of the plant was already under planned shutdown at the time of flooding. The unit is expected to be back on line after completing planned shutdown maintenance jobs shortly. Unit-Z is due for commissioning shortly. The rehabilitation jobs did not involve any maior expenditure and were carried out as part of regular maintenance jobs. As such there is no loss due to the non-working of the Z units at Kakrapar.

(f) Nuclear Power Corporation of India Ltd. has already taken up the matter with the Irrigation Department of the Govt. of Gujarat for continuous monitoring of the water level in the Kakrapar weir during monsoon and to take prompt action to avoid recurrence of such flooding in future. All possible preventive actions for avoiding overflow of water into the Plant site have also been taken.

Safety aspect of nuclear reactors

1339 MISS SAROJ KHAPARDE: Will the PRIME MINISTER be pleased to state:

(a) whether all the Nuclear Reactors working in India at present are safe;

(b) if so, the details thereof;

(c) the number of US-built reactors among the above reactors;

(d) whether it is a fact that ten similar reactors in the USA have recently developed cracks; and

(e) if so, what specific safety measures have been taken by Government in this regard?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) and (b) Yes, Sir. The nuclear power reactors in India have been designed based on a defence-in-depth philosophy, incorporating several barriers to prevent the escape of radioactivity from the reactors to the environment. Operation of the nuclear power reactors is governed by a set of Technical Specifications and is subject to comprehensive safety reviews. The safety aspects of the nuclear power stations are reviewed by the Atomic Energy Regulatory Board before authorising continued operation. Regular surveillance of the environment in and aroud the nuclear power stations is carried out by the Environmental Survey Laboratories at each nuclear power station.

In the three decades of development of nuclear power in India, there has not been a single accident involving release of radioactivity to the environment.

(c) Two nuclear power reactors at Tarapur (TAPS I & 2) were built with U.S. assistance.

(d) and (e) The cracks observed in U.S. boiling water reactors recently are in the core support shroud which is a reactor internal component which surrounds the reactor core having the nuclear fuel and directs the coolant flow. These were detected by visual examination using under water TV. TAPS reactors have similar core shroud made of 1 inch (25.4 mm) thick stainless steel plates. The core support shroud region in TAPs Unit-1 was inspected during the recent refueling outage (Feb-June 1994) using under water TV to the extent possible in accessible areas and no abnormality was observed. Similar examinaion is planned for Unit-2 in the forthcoming outage sometime in December 1994. In addition a detailed examination using a minature under water camera as well as Ultrasonic Test (UT) equipment is planned for the examination of the weld joints of these core shrouds.

Atomic Energy Act, 1962

1340. SHRI SOM PAL: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that the Atomic Energy Act, 1962 is an archaic one and 32 years old and that its clause 18(1) restricts the disclosure of information necessary for purposeful regulatory enforcement of safety rules and procedures;

(b) whether it is also a fact that the Atomic Energy Regulatory Board (AERB) has no power to investigate the malfunctioning of a nuclear plant, neither can it protect an informer, nor can it take punitive action against any one for violation of safety rules and procedures; and

(c) whether Goverment have thought of necessary amendments to the Act, 1962 in order to make Department Atomic Energy more open and accountable; if not, the reasons therefor?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) No, Sir. Clause 18(1) of the Atomic Energy Act does not restrict the disclousre of information necessary for purposeful regulatory enforcement of safety rules and procedures.